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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/348,518	07/07/1999	HIROSHI MURAKAMI	31050.5US01	5347

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JEFFER, MANGELS, BUTLER & MARMARO LLP
2121 AVENUE OF THE STARS
TENTH FLOOR
LOS ANGELES, CA 90067

EXAMINER

BROADHEAD, BRIAN J

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 02/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/348,518

Applicant(s)

MURAKAMI ET AL.

Examiner

Brian J. Broadhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15, 16 and 18-25 is/are rejected.
- 7) ☒ Claim(s) 13, 14 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 11, 12, 15, 19, 22, 2, 3, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850, in view of Kondo et al., 6181991.

Kane et al. discloses a sensor installed on the vehicle for sensing SAE of the vehicle on line 40, on column 2; a vehicle subsystem including a wireless communication unit installed on the vehicle and operatively coupled to the sensor for transmitting SAE information corresponding to a SAE sense by the sensor and a central station including a computer system coupled in wireless communication with said wireless communication unit for receiving and processing SAE information transmitted by said wireless communication unit on lines 46-47, on column 2; and the central station comprises a recording device and said SAE processing comprises recording SAE information on lines 15-19, on column 3. Kane does not disclose the SAE is the SOC of a battery and the sensor senses the SOC of the battery; the central station comprises a display device and said processing SAE information comprises displaying SAE information; that the location information and stored amount of energy information are

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used for vehicle allocation by the central computer in a vehicle sharing system; and the central system is further programmed to define a vehicle search group for each port in which one or more vehicles from the fleet may be present at any given time and to select and allocate a vehicle for a user at a given port from the vehicle search group defines. Kondo et al. teaches the SAE is the SOC of a battery and the sensor senses the SOC of the battery on lines 5-9, on column 4; and the central station comprises a display device and said processing SAE information comprises displaying SAE information on lines 1-10, on column 3; and that the location information, stored amount of energy information, and user-input information regarding the user's intended trip are used for vehicle allocation by the central computer in a vehicle sharing system on lines 56-65, on column 1; and the central system is further programmed to define a vehicle search group for each port in which one or more vehicles from the fleet may be present at any given time and to select and allocate a vehicle for a user at a given port from the vehicle search group defines on lines 25-32, on column 3. It would have been obvious to one of ordinary skill in the art to use the battery and display of Kondo et al. in the invention of Kane et al. because Kondo teaches of using his invention in an electric battery system or in a internal combustion system and from his teaching one would know that internal combustion engines and electric motor with battery systems could be used interchangeably.

3. Claims 5, 6, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850 and Kondo et al., 6181991, in view of Kikuchi et al., 6133707.

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4. As per claim 5 and 23, Kane et al. and Kondo et al. disclose all the limitations as set forth above. Kane et al. and Kondo et al. do not disclose comparing a sensed SAE with a previously sensed SAE to generate a first signal in response to a change between the compared SAEs greater than a predefined value. Kikuchi et al. teaches disclose comparing a sensed SAE with a previously sensed SAE to generate a first signal in response to a change between the compared SAEs greater than a predefined value on lines 21-26, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the comparing of Kikuchi et al. in the invention of Kane et al. and Kondo et al. because it would warn of abnormal operations.

5. As per claim 6, Kane et al. discloses a display device in the vehicle and a processor operatively couple to the display device and in wireless communication with the computer system and programmed to respond to a first signal from the computer system to display a first warning on the display on lines 27-38, on column 8.

6. Claims 7, 8, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al. and Kondo et al., 6181991, in view of Kikuchi et al. as applied to claims 6 and 23 above, and further in view of Tabata et al., 5908453.

7. Kane et al., Kondo et al., and Kikuchi et al. disclose all the limitations as set forth above. They do not disclose determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device. Tabata et al. teaches determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE

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being less than a predefined minimum and then displaying a warning message on the vehicle display device on lines 25-32, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the warning of Tabata et al. in the invention of Kane et al. Kondo et al., and Kikuchi et al. because such modification would provide more useful features to an SAE system.

8. Claims 9, 10 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850, and Kondo et al., 6181991, in view of Tabata et al., 5908453.

Kane et al. and Kondo et al. disclose all the limitations as set forth above. Kane et al. and Kondo et al. do not disclose determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device. Tabata et al. teaches determining when the SAE is greater than a predetermined value and generating a second signal in response to the sensed SAE being less than a predefined minimum and then displaying a warning message on the vehicle display device on lines 25-32, on column 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the warning device of Tabata et al. in the invention of Kane et al. and Kondo et al. to prevent the vehicle from falling to too low of a SAE and make energy control simpler.

Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kane et al., 6078850, and Kondo et al., 6181991, in view of Henze et al., 5803215.

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Kane et al. and Kondo et al. disclose all the limitations as set forth above. Kane et al. and Kondo et al. do not disclose the central computer system determines a charging order for a plurality of vehicles located at a port based on the stored amount of energy of each vehicle in the plurality of vehicles; and said charging facility defines a charging rate for each vehicle as the vehicles increasing SOC over the charging period and wherein the plot of the charging rate of each vehicle includes a generally linear region and a nonlinear section and assigning vehicles to charger if SOC of the vehicle is in the linear region. Henze et al. teaches of the central computer system determines a charging order for a plurality of vehicles located at a port based on the stored amount of energy of each vehicle in the plurality of vehicles on lines 35-49, on column 2; and said charging facility defines a charging rate for each vehicle as the vehicles increasing SOC over the charging period and wherein the plot of the charging rate of each vehicle includes a generally linear region and a nonlinear section and assigning vehicles to charger if SOC of the vehicle is in the linear region on lines 62-65, on column 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the charging system of Henze et al. in the invention of Kane et al. and Kondo et al. because such modification would provide a system that would charge the batteries of the cars and protect them from overcharging.

Allowable Subject Matter

1. Claims 13, 14, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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2. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose the central station computer system is further programmed to process vehicle location information for a vehicle due to arrive at a given port, to provide an estimated time of arrival of the vehicle at that port and for including the vehicle in the vehicle search group for that port if the estimated time of arrival is within a predefined time period; including in vehicle search group of a given port the vehicle at a charging facility at the port if the vehicle has a charging time period which is due to expire within a predefined time period; and the charging order of the vehicles is based on the current stored amount of energy, with the lowest being charged first and the highest last.

Response to Arguments

3. Applicant's arguments filed 11-19-01 have been fully considered but they are not persuasive. The first argument deals with being able to monitor the stored amount of energy regardless of the location of the vehicle. Kane et al. does disclose this feature. The second argument deals with the central computer selecting a vehicle based on the user's input of information dealing with his/her intended trip. Kondo et al. has not been cited in the rejection for disclosing this feature.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 703-308-9033. The examiner can normally be reached on Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A. Cuchlinski can be reached on 703-308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

BJB
February 5, 2002

Jacqueline D. Jones
JACQUELINE D. JONES
February 5, 2002